

City of Salem Contributory Retirement System

*Actuarial Valuation and Review
as of January 1, 2008*

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June 19, 2008

*Board of Trustees
City of Salem Contributory Retirement System
20 Central Street, Suite 110
Salem, MA 01970*

Dear Board Members:

We are pleased to submit this Actuarial Valuation and Review as of January 1, 2008. It summarizes the actuarial data used in the valuation, establishes the funding requirements for fiscal 2009 and later years and analyzes the preceding two years' experience.

The census information and financial information on which our calculations were based was prepared by the staff of the Salem Retirement System. That assistance is gratefully acknowledged. The actuarial calculations were completed under my supervision.

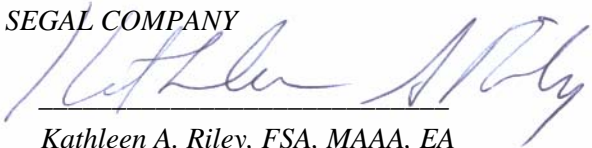
This actuarial valuation has been completed in accordance with generally accepted actuarial principles and practices. To the best of our knowledge, the information supplied in this actuarial valuation is complete and accurate. Further, in our opinion, the assumptions as approved by the Board are reasonably related to the experience of and the expectations for the Plan.

We look forward to reviewing this report at your next meeting and to answering any questions.

Sincerely,

THE SEGAL COMPANY

By:


*Kathleen A. Riley, FSA, MAAA, EA
Senior Vice President and Actuary*

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SECTION 1: Valuation Summary for the City of Salem Contributory Retirement System

Purpose

This report has been prepared by The Segal Company to present a valuation of the City of Salem Contributory Retirement System as of January 1, 2008. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits. The contribution requirements presented in this report are based on:

- The benefit provisions of M.G.L. Chapter 32;
- The characteristics of covered active participants, inactive participants, and retired participants and beneficiaries as of January 1, 2008;
- The assets of the Plan as of December 31, 2007;
- Economic assumptions regarding future salary increases and investment earnings; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

Significant Issues in Valuation Year

The following key findings were the result of this actuarial valuation:

- The market value of assets of \$100,667,145 as reported in the Annual Statement as of December 31, 2007 was reduced by the value of the First America Asia Fund (\$1,598,155), resulting in a market value of \$99,068,990.
- The actuarial valuation report as of January 1, 2008 is based on financial information as of that date. Changes in the value of assets subsequent to that date are not reflected.
- During the plan years ended 2006 and 2007, the market value rates of return were 13.73% and 5.13%, respectively. Because the actuarial value of assets gradually recognizes market value fluctuations over a five-year period, the actuarial rate of return for the plan years ended 2006 and 2007 were 7.13% and 9.18%, respectively. The actuarial value of assets as of December 31, 2007 was \$100.0 million, or 100.9% of the market value of assets of \$99.1 million. As of December 31, 2005, the actuarial value of assets was 103.2% of market value.
- As of January 1, 2006 the System had an unfunded liability of \$82.2 million. The unfunded liability has decreased to \$79.4 million as of January 1, 2008 due to contributions made and salary increases less than projected for continuing actives, partially offset by fewer deaths than projected amongst retirees and beneficiaries.
- The administrative expense assumption was increased from \$360,000 for calendar 2006 to \$370,000 for calendar 2008.

SECTION 1: Valuation Summary for the City of Salem Contributory Retirement System

- Based on the funding schedule used in the prior valuation (17-year increasing amortization of the unfunded liability with payments increasing 4.0% per year) the preliminary recommended contribution for fiscal 2009 is \$9,052,658 compared to the budgeted appropriation of \$9,478,304 determined with the prior valuation. The Board has elected to appropriate the average of these two amounts, or \$9,265,481 for fiscal 2009. The fiscal 2010 appropriation of \$9,628,758 is based on a funding schedule that amortizes the unfunded liability by June 30, 2025 with payments increasing 3.5% per year.

SECTION 1: Valuation Summary for the City of Salem Contributory Retirement System

Summary of Key Valuation Results

| | 2008 | 2006 |
|--|--------------|--------------|
| Contributions for fiscal year beginning July 1: | | |
| Recommended for fiscal 2009 and 2007 | \$9,265,481 | \$8,431,371 |
| Recommended for fiscal 2010 and 2008 | 9,628,758 | 8,939,912 |
| Funding elements for plan year beginning January 1: | | |
| Normal cost, including administrative expenses | \$5,451,493 | \$5,213,311 |
| Market value of assets | 99,068,990 | 82,180,973 |
| Actuarial value of assets | 99,998,471 | 84,796,044 |
| Actuarial accrued liability | 179,382,299 | 166,958,606 |
| Unfunded actuarial accrued liability | 79,383,828 | 82,162,562 |
| GASB 25/27 for fiscal year beginning July 1: | | |
| Annual required contributions | \$9,265,481 | \$8,468,103 |
| Actual contributions | -- | 8,468,103 |
| Percentage contributed | -- | 100.00% |
| Funded ratio | 55.75% | 50.79% |
| Demographic data for plan year beginning January 1: | | |
| Number of retired participants and beneficiaries | 596 | 614 |
| Number of inactive participants entitled to a return of their employee contributions | 170 | 149 |
| Number of inactive participants with a vested right to a deferred or immediate benefit | 22 | 21 |
| Number of active participants | 825 | 831 |
| Total payroll | \$32,668,873 | \$31,143,877 |
| Average payroll | 39,599 | 37,428 |

SECTION 2: Valuation Results for the City of Salem Contributory Retirement System

A. PARTICIPANT DATA

The Actuarial Valuation and Review considers the number and demographic characteristics of covered participants, including active participants, inactive participants, retired participants and beneficiaries.

This section presents a summary of significant statistical data on these participant groups.

More detailed information for this valuation year and the preceding valuation can be found in Section 3, Exhibits A and B.

A historical perspective of how the participant population has changed over the past five valuations can be seen in this chart.

CHART 1

Participant Population: 2002 – 2007

| Year Ended December 31 | Active Participants | Inactive Participants | Retired Participants and Beneficiaries |
|---------------------------|------------------------|--------------------------|---|
| 2002 | 876 | 117 | 586 |
| 2003 | 839 | 129 | 607 |
| 2004 | 840 | 146 | 618 |
| 2005 | 831 | 170 | 614 |
| 2007 | 825 | 192 | 596 |

SECTION 2: Valuation Results for the City of Salem Contributory Retirement System

Active Participants

Plan costs are affected by the age, years of service and payroll of active participants. In this year's valuation, there were 825 active participants with an average age of 48.3, average years of service of 11.6 years and average payroll of \$39,599. The 831 active participants in the prior valuation had an average age of 47.8, average service of 10.7 years and average payroll of \$37,478.

Among the active participants, there were none with unknown age and/or service information.

Inactive Participants

In this year's valuation, there were 22 participants with a vested right to a deferred or immediate vested benefit and 170 participants entitled to a return of their employee contributions.

These graphs show a distribution of active participants by age and by years of service.

CHART 2

Distribution of Active Participants by Age as of December 31, 2007

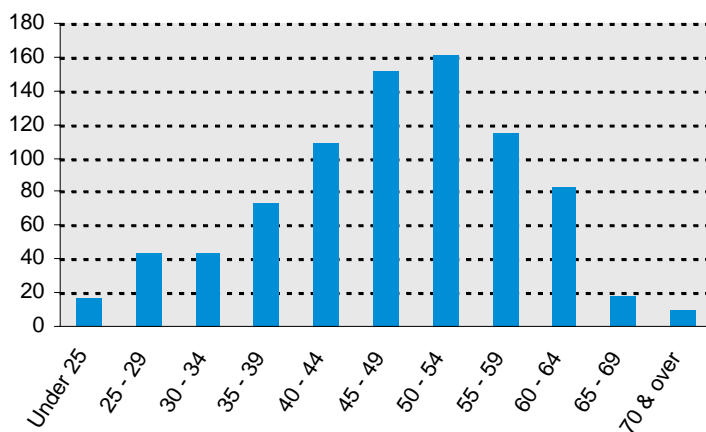
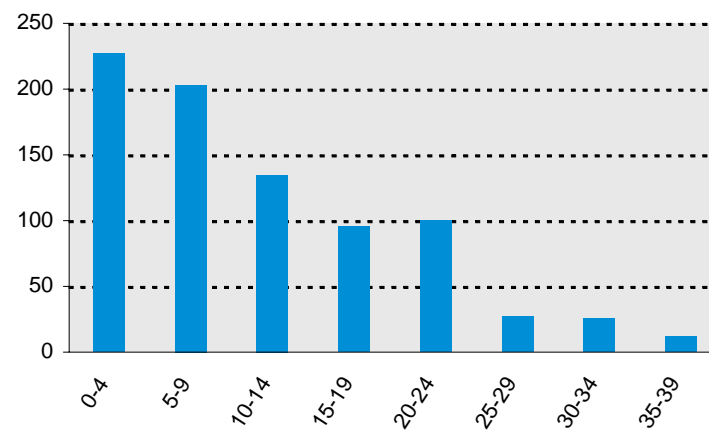


CHART 3

Distribution of Active Participants by Years of Service as of December 31, 2007



SECTION 2: Valuation Results for the City of Salem Contributory Retirement System

Retired Participants and Beneficiaries

As of December 31, 2007, 596 retired participants and beneficiaries were receiving total monthly benefits of \$905,077, excluding COLAs reimbursed by the Commonwealth. For comparison, in the previous valuation, there were 614 retired participants and beneficiaries receiving monthly benefits of \$883,196, excluding COLAs reimbursed by the Commonwealth. There was 1 retired participant in suspended status this year and none in the prior valuation.

These graphs show a distribution of the current retired participants and beneficiaries based on their monthly amount and age, by type of pension.

CHART 4

Distribution of Retired Participants and Beneficiaries by Type and by Monthly Amount as of December 31, 2007

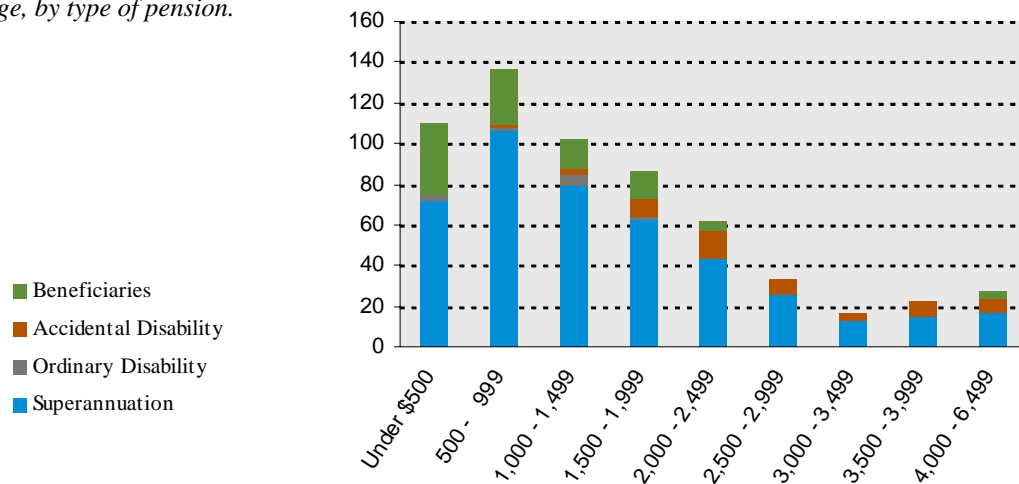
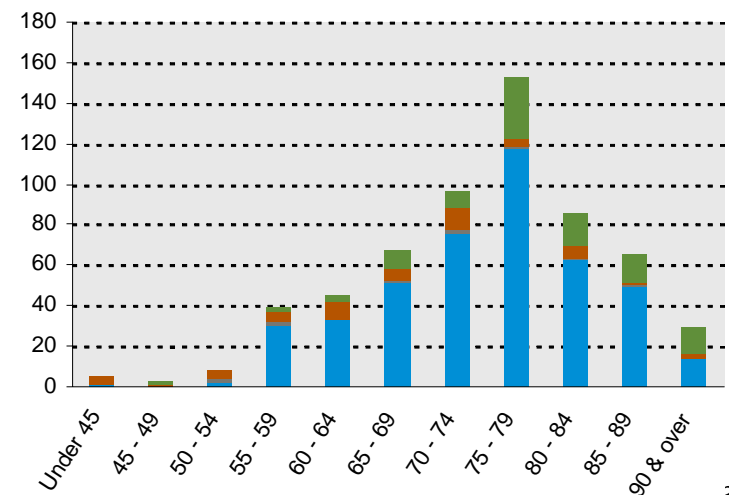


CHART 5

Distribution of Retired Participants and Beneficiaries by Type and by Age as of December 31, 2007



SECTION 2: Valuation Results for the City of Salem Contributory Retirement System

B. FINANCIAL INFORMATION

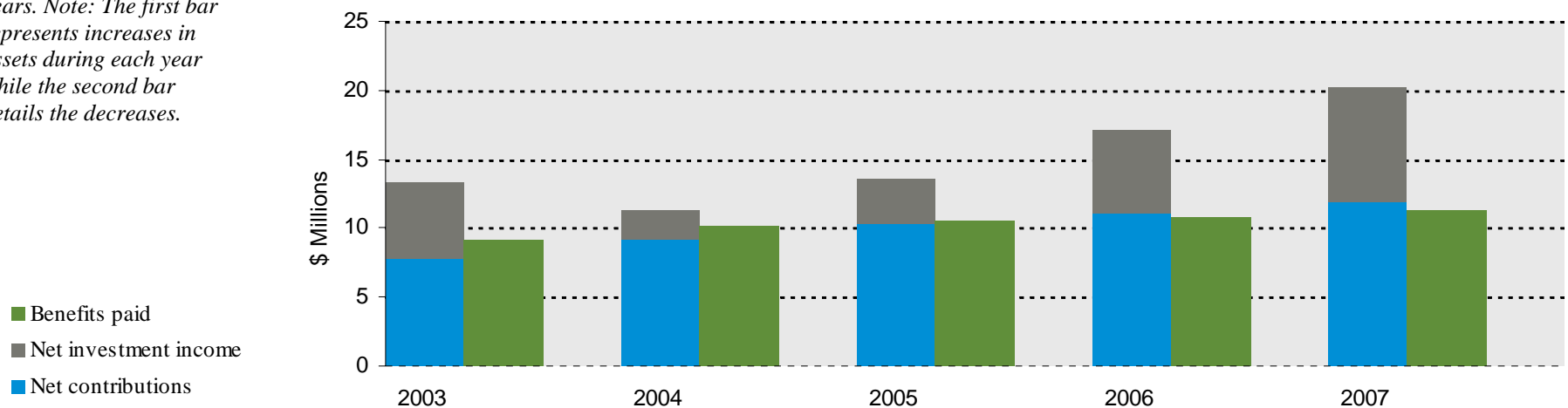
Retirement plan funding anticipates that, over the long term, both net contributions (less administrative expenses) and net investment earnings (less investment fees) will be needed to cover benefit payments.

Retirement plan assets change as a result of the net impact of these income and expense components. Additional financial information, including a summary of these transactions for the valuation year, is presented in Section 3, Exhibits C and D.

The chart depicts the components of changes in the actuarial value of assets over the last five years. Note: The first bar represents increases in assets during each year while the second bar details the decreases.

CHART 6

Comparison of Increases and Decreases in the Actuarial Value of Assets for Years Ended December 31, 2003 – 2007



SECTION 2: Valuation Results for the City of Salem Contributory Retirement System

It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Board has approved an asset valuation method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the asset value and the plan costs are more stable.

The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value.

The chart shows the determination of the actuarial value of assets as of the valuation date.

CHART 7 Determination of Actuarial Value of Assets

| | Year Ended | |
|---|---------------------|------------------------|
| | December 31, 2007 | December 31, 2006 |
| 1. Market value of assets | \$99,068,990* | \$93,677,802 |
| 2. Calculation of unrecognized return** | Original Amount | Unrecognized Amount |
| (a) Year ended December 31, 2007 | -\$2,711,455 | N/A |
| (b) Year ended December 31, 2006 | 4,080,177 | \$3,264,142 |
| (c) Year ended December 31, 2005 | -3,248,331 | -1,948,998 |
| (d) Year ended December 31, 2004 | 454,552 | 181,820 |
| (e) Year ended December 31, 2003 | 5,667,045 | <u>1,133,409</u> |
| (f) Total unrecognized return | -929,481 | 2,630,373 |
| 3. Preliminary actuarial value: (1) - (2f) | 99,998,471 | 91,047,429 |
| 4. Adjustment to be within 20% corridor | 0 | 0 |
| 5. Final actuarial value of assets: (3) + (4) | <u>\$99,998,471</u> | <u>\$91,047,429</u> |
| 6. Actuarial value as a percentage of market value: (5) ÷ (1) | 100.9% | 97.2% |

* December 31, 2007 market value of assets of \$100,667,145 reported on the Annual Statement as of December 31, 2007 was reduced by the value of the First America Asia Fund (\$1,598,155) to \$99,068,990.

** Unrecognized return is the difference between the total return and the expected return on a market value basis and is recognized over a five-year period.

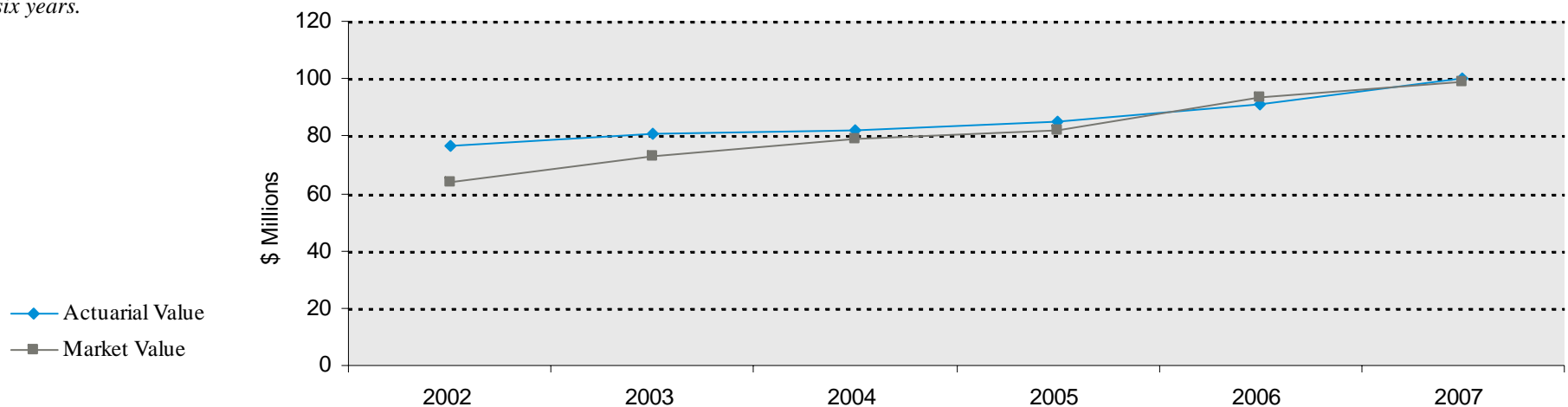
SECTION 2: Valuation Results for the City of Salem Contributory Retirement System

Both the actuarial value and market value of assets are representations of the Salem Retirement System's financial status. As investment gains and losses are gradually taken into account, the actuarial value of assets tracks the market value of assets. The actuarial asset value is significant because the Salem Retirement System's liabilities are compared to these assets to determine what portion, if any, remains unfunded. Amortization of the unfunded actuarial accrued liability is an important element in determining the contribution requirement.

This chart shows the change in the actuarial value of assets versus the market value over the past six years.

CHART 8

Actuarial Value of Assets vs. Market Value of Assets as of December 31, 2002 – 2007



SECTION 2: Valuation Results for the City of Salem Contributory Retirement System

C. ACTUARIAL EXPERIENCE

To calculate the required contribution, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. If overall experience is more favorable than anticipated (an actuarial gain), the contribution requirement will decrease from the previous year. On the other hand, the contribution requirement will increase if overall actuarial experience is less favorable than expected (an actuarial loss).

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single year's experience was a short-term

development and that, over the long term, experience will return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience.

If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

The total experience gain for the two-year period ended December 31, 2007 is \$3,446,806. A discussion of the major components of the actuarial experience is on the following pages.

This chart provides a summary of the actuarial experience over the past two years.

CHART 9

Actuarial Experience for Two-Year Period Ended December 31, 2007

| | |
|--|------------------|
| 1. Net loss from investments* | -\$104,628 |
| 2. Net gain from administrative expenses | 24,257 |
| 3. Net gain from other experience** | <u>3,527,177</u> |
| 4. Net experience gain: (1) + (2) + (3) | \$3,446,806 |

* Details in Chart 10

** Details in Chart 13

SECTION 2: Valuation Results for the City of Salem Contributory Retirement System

Investment Rate of Return

A major component of projected asset growth is the assumed rate of return. The assumed return should represent the expected long-term rate of return, based on the Salem Retirement System's investment policy. For valuation purposes, the assumed rate of return on the actuarial value of assets was 8.25%. The actual rate of return on an actuarial basis for the 2007 and 2006 plan years was 9.18% and 7.13%, respectively.

Since the actual return for the two-year period was less than the assumed return, the Salem Retirement System experienced an actuarial loss during the period ending December 31, 2007 with regard to its investments of \$104,628.

This chart shows the gain/(loss) due to investment experience.

CHART 10 Actuarial Value Investment Experience

| | Year Ended | |
|-------------------------------------|-------------------|-------------------|
| | December 31, 2007 | December 31, 2006 |
| 1. Actual return | \$8,383,232 | \$6,050,918 |
| 2. Average value of assets | 91,331,334 | 84,896,278 |
| 3. Actual rate of return: (1) ÷ (2) | 9.18% | 7.13% |
| 4. Assumed rate of return | 8.25% | 8.25% |
| 5. Expected return: (2) x (4) | \$7,534,835 | \$7,003,943 |
| 6. Actuarial gain/(loss): (1) – (5) | <u>\$848,397</u> | <u>-\$953,025</u> |

SECTION 2: Valuation Results for the City of Salem Contributory Retirement System

Because actuarial planning is long term, it is useful to see how the assumed investment rate of return has followed actual experience over time. The chart below shows the rate of return on an actuarial basis compared to the market value investment return for the last five years, including an average return over that period.

Based upon this experience and future expectations, we have maintained the assumed rate of return of 8.25%.

CHART 11

Investment Return – Actuarial Value vs. Market Value: 2003 - 2007

| Year Ended December 31 | Actuarial Value Investment Return | | Market Value Investment Return | |
|---------------------------|-----------------------------------|---------|--------------------------------|---------|
| | Amount | Percent | Amount | Percent |
| 2003 | \$5,563,552 | 7.34% | \$10,814,423 | 17.16% |
| 2004 | 2,177,899 | 2.72 | 6,590,555 | 9.07 |
| 2005 | 3,233,422 | 3.96 | 3,694,639 | 4.70 |
| 2006 | 6,050,918 | 7.13 | 11,296,361 | 13.73 |
| 2007 | <u>8,383,232</u> | 9.18 | <u>4,823,380</u> | 5.13 |
| Total | \$25,409,023 | | \$37,219,658 | |
| Five-year average return | | 6.14% | 9.53% | |

Note: Each year's yield is weighted by the average asset value in that year.

SECTION 2: Valuation Results for the City of Salem Contributory Retirement System

Subsection B described the actuarial asset valuation method that gradually takes into account fluctuations in the market value rate of return. The effect of this is to stabilize the actuarial rate of return, which contributes to leveling pension plan costs.

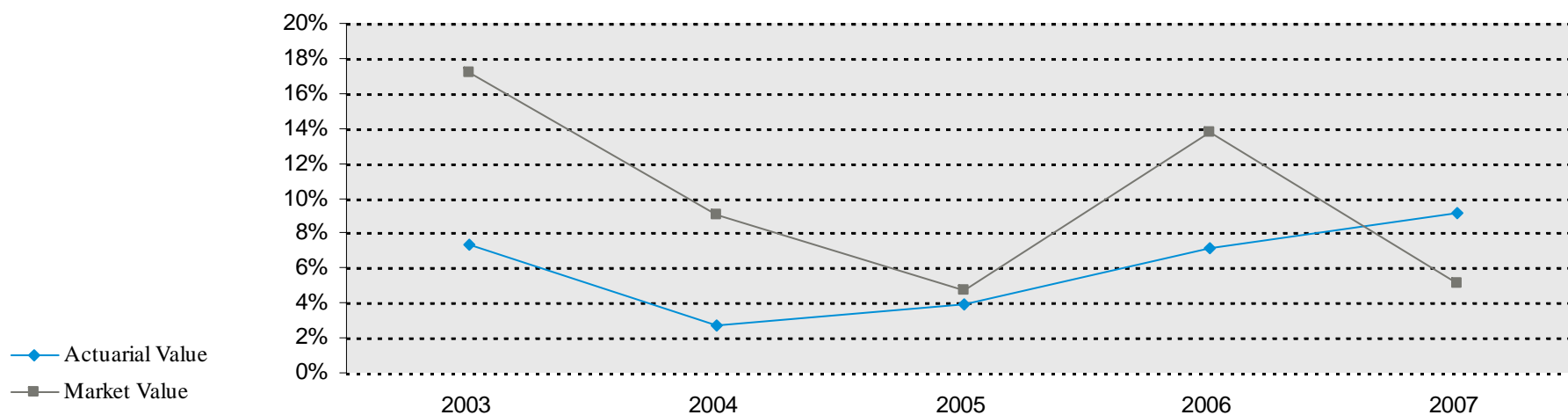
Administrative Expenses

Administrative expenses for the years ended December 31, 2007 and 2006 were \$401,427 and \$312,365, respectively, compared to the assumption of \$376,200 for calendar 2007 and \$360,000 for calendar 2006. This resulted in a gain of \$24,257 for the two-year period including an adjustment for interest. Based on budgeted expenses, we have revised the assumption to \$370,000 for calendar 2008.

This chart illustrates how this leveling effect has actually worked over the years 2003 - 2007.

CHART 12

Market and Actuarial Rates of Return for Years Ended December 31, 2003 - 2007



SECTION 2: Valuation Results for the City of Salem Contributory Retirement System

Other Experience

There are other differences between the expected and the actual experience that appear when the new valuation is compared with the projections from the previous valuation. These include:

- the extent of turnover among the participants,
- retirement experience (earlier or later than projected),
- mortality (more or fewer deaths than projected),

- the number of disability retirements, and
- salary increases different than assumed.

The net gain from this other experience for the two-year period ending December 31, 2007 amounted to \$3,527,177 which is 2.0% of the actuarial accrued liability.

A brief summary of the demographic gain/(loss) experience for the two-year period ending December 31, 2007 is shown in the chart below.

The chart shows elements of the experience gain/(loss) for the most recent years.

CHART 13

Experience Due to Changes in Demographics for Two-Year Period Ended December 31, 2007

| | |
|--|--------------------|
| 1. Fewer deaths than projected amongst retired members and beneficiaries | -\$1,776,544 |
| 2. Salary increases less than projected for continuing actives | 3,854,784 |
| 3. Miscellaneous gain | <u>1,448,937</u> |
| 4. Total | <u>\$3,527,177</u> |

SECTION 2: Valuation Results for the City of Salem Contributory Retirement System

D. RECOMMENDED CONTRIBUTION

The amount of annual contribution required to fund the Plan is comprised of an employer normal cost payment and a payment on the unfunded actuarial accrued liability.

Based on the funding schedule used in the prior valuation (17-year increasing amortization of the unfunded liability with payments increasing 4.0% per year) the preliminary recommended contribution for fiscal 2009 is \$9,052,658 compared to the budgeted appropriation of \$9,478,304

determined with the prior valuation. The Board has elected to appropriate the average of these two amounts, or \$9,265,481 for fiscal 2009. The fiscal 2010 appropriation of \$9,628,758 is based on a funding schedule that amortizes the unfunded liability by June 30, 2025 with payments increasing 3.5% per year.

Exhibit G in Section 3 shows the recommended contribution through 2028 based on this funding schedule.

The chart compares this valuation's recommended contribution with the prior valuation.

CHART 14
Recommended Contribution

| | Year Beginning January 1 | | | |
|--|--------------------------|---------------|-------------------|---------------|
| | 2008 | | 2006 | |
| | Amount | % of Payroll | Amount | % of Payroll |
| 1. Total normal cost | \$5,081,493 | 14.77% | \$4,853,311 | 14.79% |
| 2. Administrative expenses | 370,000 | 1.08% | 360,000 | 1.10% |
| 3. Expected employee contributions | <u>-3,044,638</u> | <u>-8.85%</u> | <u>-2,882,097</u> | <u>-8.78%</u> |
| 4. Employer normal cost: (1) + (2) + (3) | \$2,406,855 | 6.99% | \$2,331,214 | 7.10% |
| 5. Actuarial accrued liability | 179,382,299 | | 166,958,606 | |
| 6. Actuarial value of assets | <u>99,998,471</u> | | <u>84,796,044</u> | |
| 7. Unfunded actuarial accrued liability: (5) - (6) | \$79,383,828 | | \$82,162,562 | |
| 8. Employer normal cost projected to July 1, 2008 and 2006, adjusted for timing | 2,471,051 | 7.03% | 2,393,905 | 7.13% |
| 9. Projected unfunded actuarial accrued liability | 82,593,381 | | 85,484,608 | |
| 10. Payment on projected unfunded actuarial accrued liability, adjusted for timing | 6,581,607 | 18.71% | 6,417,550 | 19.13% |
| 11. Preliminary recommended contribution: (8) + (10), adjusted for timing | 9,052,658 | 25.74% | 8,811,445 | 26.26% |
| 12. Budgeted appropriation, adjusted for timing, from prior valuation | 9,478,304 | 26.95% | <u>8,431,371</u> | 25.13% |
| 13. Fiscal 2009 appropriation: [(11) + (12)] ÷ 2 | <u>9,265,481</u> | 26.34% | N/A | N/A |
| 14. Projected payroll | \$35,175,708 | | \$33,554,560 | |

Notes: Amortization payments increase at 4.0% per year for 2006 and the preliminary 2008 contribution. Recommended contribution and budgeted appropriation include adjustment for timing.

SECTION 2: Valuation Results for the City of Salem Contributory Retirement System

The recommended contribution is based on all of the data described in the previous sections, the actuarial assumptions described in Section 4, and the Plan provisions adopted at the time of preparation of the Actuarial Valuation. They include all changes affecting future costs, adopted benefit changes, actuarial gains and losses and changes in the actuarial assumptions.

Reconciliation of Recommended Contribution

The chart below details the changes in the recommended contribution from the prior valuation to the current year's valuation.

The chart reconciles the contribution from the prior valuation to the amount determined in this valuation.

CHART 15

Reconciliation of Recommended Contribution from July 1, 2006 to July 1, 2008

| | |
|--|-------------------------|
| Budgeted appropriation for fiscal 2007 | \$8,431,372 |
| Expected increase | \$1,046,932 |
| Effect of change in administrative expense assumption | -6,623 |
| Effect of salary increases less than expected for continuing actives | -318,855 |
| Effect of investment loss | 8,716 |
| Effect of fewer deaths than projected for retirees and beneficiaries | 146,950 |
| Effect of other gains and losses on accrued liability | -119,851 |
| Effect of net other changes | <u>-135,983</u> |
| Total change | <u>\$621,286</u> |
| Preliminary recommended contribution for fiscal 2009 | \$9,052,658 |
| Fiscal 2009 appropriation | \$9,265,481 |

SECTION 2: Valuation Results for the City of Salem Contributory Retirement System

E. INFORMATION REQUIRED BY THE GASB

Governmental Accounting Standards Board (GASB) reporting information provides standardized information for comparative purposes of governmental pension plans. This information allows a reader of the financial statements to compare the funding status of one governmental plan to another on relatively equal terms.

Critical information to the GASB is the historical comparison of the GASB required contribution to the actual contributions. This comparison demonstrates whether a plan is being funded within the range of the GASB reporting requirements. Chart 16 below presents a graphical representation of this information for the Plan.

The other critical piece of information regarding the Plan's financial status is the funded ratio. This ratio compares the

actuarial value of assets to the actuarial accrued liabilities of the plan as calculated under the GASB. High ratios indicate a well-funded plan with assets sufficient to pay most benefits. Lower ratios may indicate recent changes to benefit structures, funding of the plan below actuarial requirements, poor asset performance, or a variety of other factors.

Although the GASB requires that the actuarial value of assets be used to determine the funded ratio, Chart 17 shows the funded ratio calculated using both the actuarial value of assets (55.75%) and the market value of assets (55.23%).

The details regarding the calculations of these values and other GASB numbers may be found in Section 4, Exhibits II, III, and IV.

These graphs show key GASB factors.

CHART 16
Required Versus Actual Contributions

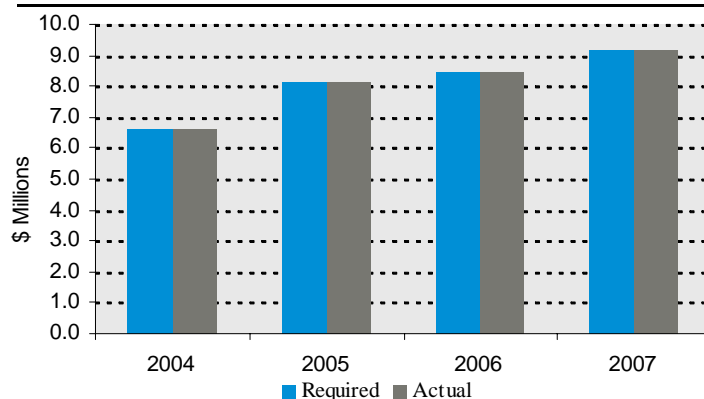
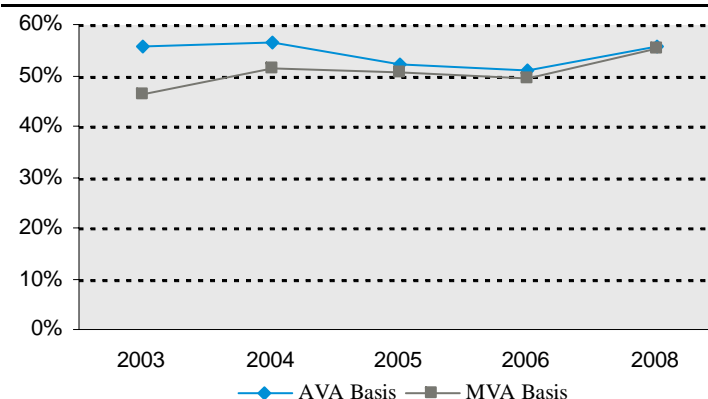


CHART 17
Funded Ratio



SECTION 3: Supplemental Information for the City of Salem Contributory Retirement System

EXHIBIT A

Table of Plan Coverage

| | Year Ended December 31 | | Change From Prior Year |
|--|------------------------|--------------|---------------------------|
| Category | 2007 | 2005 | |
| Active participants in valuation: | | | |
| Number | 825 | 831 | -0.7% |
| Average age | 48.3 | 47.8 | N/A |
| Average service | 11.6 | 10.7 | N/A |
| Total payroll | \$32,668,873 | \$31,143,877 | 4.9% |
| Average payroll | 39,599 | 37,478 | 5.7% |
| Account balances | 29,656,373 | 25,866,523 | 14.7% |
| Inactive participants entitled to a return of their contributions | 170 | 149 | 14.1% |
| Inactive participants with a vested right to a deferred or immediate benefit | 22 | 21 | 4.8% |
| Retired participants: | | | |
| Number in pay status | 435 | 436 | -0.2% |
| Average age | 74.7 | 74.2 | N/A |
| Average monthly benefit | \$1,505 | \$1,457 | 3.3% |
| Number in suspended status | 1 | 0 | N/A |
| Disabled participants: | | | |
| Number in pay status | 63 | 66 | -4.5% |
| Average age | 66.9 | 67.8 | N/A |
| Average monthly benefit | \$2,444 | \$2,244 | 8.9% |
| Beneficiaries in pay status | 98 | 112 | -12.5% |

SECTION 3: Supplemental Information for the City of Salem Contributory Retirement System

EXHIBIT B

All Participants in Active Service as of December 31, 2007 By Age, Years of Service, and Average Payroll

| Age | Years of Service | | | | | | | | |
|-----------|------------------|----------|----------|----------|----------|----------|----------|----------|-----------|
| | Total | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 |
| Under 25 | 17 | 17 | -- | -- | -- | -- | -- | -- | -- |
| | \$21,283 | \$21,283 | -- | -- | -- | -- | -- | -- | -- |
| 25 – 29 | 44 | 42 | 2 | -- | -- | -- | -- | -- | -- |
| | \$25,008 | \$24,969 | \$25,829 | -- | -- | -- | -- | -- | -- |
| 30 – 34 | 44 | 22 | 20 | 2 | -- | -- | -- | -- | -- |
| | \$40,116 | \$33,054 | \$46,540 | \$53,551 | -- | -- | -- | -- | -- |
| 35 – 39 | 73 | 24 | 14 | 30 | 5 | -- | -- | -- | -- |
| | \$43,243 | \$28,540 | \$43,413 | \$52,805 | \$55,973 | -- | -- | -- | -- |
| 40 – 44 | 109 | 29 | 23 | 18 | 20 | 19 | -- | -- | -- |
| | \$44,238 | \$22,503 | \$32,347 | \$51,660 | \$66,417 | \$61,428 | -- | -- | -- |
| 45 – 49 | 152 | 37 | 43 | 20 | 19 | 28 | 5 | -- | -- |
| | \$41,731 | \$22,431 | \$33,418 | \$48,490 | \$52,673 | \$66,361 | \$49,485 | -- | -- |
| 50 – 54 | 161 | 26 | 41 | 31 | 22 | 25 | 8 | 8 | -- |
| | \$39,863 | \$17,315 | \$27,409 | \$38,178 | \$42,942 | \$63,523 | \$72,269 | \$68,683 | -- |
| 55 – 59 | 115 | 15 | 38 | 22 | 11 | 12 | 2 | 11 | 4 |
| | \$39,446 | \$37,131 | \$29,465 | \$37,846 | \$38,850 | \$43,066 | \$35,366 | \$74,464 | \$48,271 |
| 60 – 64 | 83 | 13 | 15 | 10 | 13 | 11 | 9 | 5 | 7 |
| | \$38,547 | \$26,810 | \$36,943 | \$37,625 | \$36,792 | \$25,678 | \$51,362 | \$53,098 | \$61,712 |
| 65 – 69 | 18 | 2 | 5 | 1 | 2 | 5 | 1 | 1 | 1 |
| | \$39,707 | \$23,453 | \$21,018 | \$38,453 | \$62,774 | \$29,243 | \$61,519 | \$89,142 | \$101,847 |
| 70 & over | 9 | -- | 2 | 1 | 3 | -- | 2 | 1 | -- |
| | \$27,949 | -- | \$40,324 | \$38,222 | \$20,688 | -- | \$22,063 | \$26,481 | -- |
| Total | 825 | 227 | 203 | 135 | 95 | 100 | 27 | 26 | 12 |
| | \$39,599 | \$25,144 | \$33,274 | \$44,889 | \$48,916 | \$55,588 | \$54,230 | \$67,295 | \$60,576 |

SECTION 3: Supplemental Information for the City of Salem Contributory Retirement System

EXHIBIT C

Summary Statement of Income and Expenses on an Actuarial Value Basis

| | Year Ended December 31, 2007 | Year Ended December 31, 2006 |
|--|-------------------------------------|-------------------------------------|
| Contribution income: | | |
| Employer contributions | \$9,176,126 | \$8,468,103 |
| Employee contributions | 3,112,895 | 2,848,916 |
| Less administrative expenses | <u>-401,427</u> | <u>-312,365</u> |
| Net contribution income | \$11,887,594 | \$11,004,654 |
| Net investment income | <u>8,383,232</u> | <u>6,050,918</u> |
| Total income available for benefits | \$20,270,826 | \$17,055,572 |
| Less benefit payments: | | |
| Pensions | -\$10,882,809 | -\$10,272,188 |
| Net 3(8)(c) reimbursements | -136,212 | -116,918 |
| Refunds, annuities, and Option B refunds | <u>-300,764</u> | <u>-415,081</u> |
| Net benefit payments | -\$11,319,785 | -\$10,804,187 |
| Change in reserve for future benefits | \$8,951,041 | \$6,251,385 |

SECTION 3: Supplemental Information for the City of Salem Contributory Retirement System

EXHIBIT D

Development of the Fund Through December 31, 2007

| Year Ended December 31 | Employer Contributions | Employee Contributions | Other Contributions | Net Investment Return* | Administrative Expenses | Benefit Payments | Actuarial Value of Assets at End of Year |
|-----------------------------------|-----------------------------------|-----------------------------------|--------------------------------|---------------------------------------|------------------------------------|-----------------------------|---|
| 2003 | \$5,655,234 | \$2,426,100 | \$31,120 | \$5,563,552 | \$303,972 | \$9,151,909 | \$80,659,012 |
| 2004 | 6,617,862 | 2,860,514 | 14,635 | 2,177,899 | 313,259 | 10,215,286 | 81,801,377 |
| 2005 | 8,022,361 | 2,647,749 | 30,195 | 3,233,422 | 407,230 | 10,531,830 | 84,796,044 |
| 2006 | 8,468,103 | 2,848,916 | 0 | 6,050,918 | 312,365 | 10,804,187 | 91,047,429 |
| 2007 | 9,176,126 | 3,112,895 | 0 | 8,383,232 | 401,427 | 11,319,785 | 99,998,471 |

** Net of investment fees.*

SECTION 3: Supplemental Information for the City of Salem Contributory Retirement System

EXHIBIT E

Development of Unfunded Actuarial Accrued Liability for Year Ended December 31, 2007 and (Gain)/Loss

| | Year Ended | |
|--|---------------------|-------------------|
| | December 31, 2007 | December 31, 2006 |
| 1. Unfunded actuarial accrued liability at beginning of year | \$82,845,562 | \$82,162,562 |
| 2. Normal cost at beginning of year | 5,447,910 | 5,213,311 |
| 3. Total contributions | -12,289,021 | -11,317,019 |
| 4. Interest | | |
| (a) For whole year on (1) + (2) | \$7,284,212 | \$7,208,509 |
| (b) For half year on (3) | <u>-458,029</u> | <u>-421,801</u> |
| (c) Total interest | <u>6,826,183</u> | <u>6,786,708</u> |
| 5. Expected unfunded actuarial accrued liability | \$82,830,634 | \$82,845,562 |
| 6. Changes due to: | | |
| (a) Investment loss | \$104,628 | -- |
| (b) Administrative expenses gain | -24,257 | |
| (c) Retiree mortality loss | 1,776,544 | -- |
| (d) Continuing active salary gain | -3,854,784 | -- |
| (e) Miscellaneous gain | <u>-1,448,937</u> | -- |
| (f) Total changes | <u>-3,446,806</u> | -- |
| 7. Unfunded actuarial accrued liability at end of year | <u>\$79,383,828</u> | -- |

SECTION 3: Supplemental Information for the City of Salem Contributory Retirement System

EXHIBIT F

Table of Amortization Bases as of July 1, 2008

| Type | Annual Payment increasing 4.0% per year | Annual Payment increasing 3.5% per year | Years Remaining | Outstanding Balance |
|------------------------------|--|--|----------------------------|--------------------------------|
| 2002 ERI | \$67,510 | \$69,823 | 17.00 | \$838,369 |
| 2003 ERI | 173,962 | 179,924 | 17.00 | 2,185,217 |
| Remaining unfunded liability | <u>6,340,135</u> | <u>6,544,686</u> | 17.00 | <u>79,569,795</u> |
| Total | \$6,581,607 | \$6,794,430 | | \$82,593,381 |

Notes: Payments include adjustment for timing.

Amortization payments increase at 4.0% per year for preliminary recommended contribution and 3.5% per year in final funding schedule.

Does not reflect adjustment to set fiscal 2009 appropriation to the average of the budgeted appropriation and the preliminary recommended contribution.

SECTION 3: Supplemental Information for the City of Salem Contributory Retirement System

EXHIBIT G

Funding Schedule

| (1) Fiscal Year Ended June 30 | (2) Employer Normal Cost | (3) Amortization of ERI Liability | (4) Amortization of Remaining Liability | (5) Total Plan Cost: (2) + (3) + (4) | (6) Total Unfunded Actuarial Accrued Liability at Beginning of Fiscal Year |
|--|--------------------------------|---|---|--|--|
| 2009 | \$2,471,051 | \$249,745 | \$6,544,686 | \$9,265,481 | \$82,593,382 |
| 2010 | 2,582,248 | 258,486 | 6,788,024 | 9,628,758 | 82,069,131 |
| 2011 | 2,698,449 | 267,533 | 7,025,605 | 9,991,587 | 81,229,684 |
| 2012 | 2,819,879 | 276,897 | 7,271,501 | 10,368,277 | 80,054,629 |
| 2013 | 2,946,774 | 286,588 | 7,526,004 | 10,759,366 | 78,506,953 |
| 2014 | 3,079,379 | 296,619 | 7,789,414 | 11,165,412 | 76,546,267 |
| 2015 | 3,217,951 | 307,001 | 8,062,043 | 11,586,995 | 74,128,511 |
| 2016 | 3,362,759 | 317,746 | 8,344,215 | 12,024,720 | 71,205,642 |
| 2017 | 3,514,083 | 328,867 | 8,636,263 | 12,479,213 | 67,725,290 |
| 2018 | 3,672,217 | 340,377 | 8,938,532 | 12,951,126 | 63,630,390 |
| 2019 | 3,837,467 | 352,290 | 9,251,381 | 13,441,138 | 58,858,783 |
| 2020 | 4,010,153 | 364,620 | 9,575,179 | 13,949,952 | 53,342,778 |
| 2021 | 4,190,610 | 377,382 | 9,910,310 | 14,478,302 | 47,008,689 |
| 2022 | 4,379,187 | 390,590 | 10,257,171 | 15,026,948 | 39,776,317 |
| 2023 | 4,576,250 | 404,261 | 10,616,172 | 15,596,683 | 31,558,403 |
| 2024 | 4,782,181 | 418,410 | 10,987,738 | 16,188,329 | 22,260,032 |
| 2025 | 4,997,379 | 433,054 | 11,372,309 | 16,802,742 | 11,777,977 |
| 2026 | 5,222,261 | -- | -- | 5,222,261 | -- |
| 2027 | 5,457,263 | -- | -- | 5,457,263 | -- |
| 2028 | 5,702,840 | -- | -- | 5,702,840 | -- |

Notes: Amortization payments increase at 3.5% per year.

Includes adjustment for timing.

Fiscal 2009 appropriation is the average of the budgeted 2009 appropriation and the preliminary recommended contribution.

SECTION 3: Supplemental Information for the City of Salem Contributory Retirement System

EXHIBIT H

Department Statistics as of January 1, 2008

| Category | Water | South Essex Sewerage | Housing | North Shore Regional VOC | City | Total |
|---|--------------|---------------------------------|----------------|---|--------------|--------------|
| Active participants in valuation | | | | | | |
| Number | 14 | 66 | 24 | 51 | 670 | 825 |
| Average age | 52.9 | 50.9 | 50.6 | 47.7 | 47.9 | 48.3 |
| Average service | 19.3 | 15.1 | 10.7 | 6.0 | 11.5 | 11.6 |
| Total payroll | \$760,789 | \$3,370,430 | \$1,098,705 | \$1,351,449 | \$26,087,501 | \$32,668,873 |
| Average payroll | 54,342 | 51,067 | 45,779 | 26,499 | 38,937 | 39,599 |
| Inactive participants entitled to a return of their employee contributions | | | | | | |
| | 0 | 2 | 4 | 18 | 146 | 170 |
| Inactive participants with a vested right to a deferred or immediate benefit | | | | | | |
| | 0 | 2 | 1 | 1 | 18 | 22 |
| Retired participants and beneficiaries in pay status | | | | | | |
| Retired participants | 9 | 20 | 12 | 10 | 385 | 436 |
| Disabled participants | 0 | 2 | 2 | 0 | 59 | 63 |
| Beneficiaries | 2 | 6 | 2 | 1 | 87 | 98 |
| Total number in pay status | 11 | 28 | 16 | 11 | 531 | 597 |
| Total monthly benefits | \$13,175 | \$48,635 | \$23,166 | \$9,622 | \$810,479 | \$905,077 |
| Average monthly benefit | 1,198 | 1,737 | 1,448 | 875 | 1,526 | 1,516 |

SECTION 3: Supplemental Information for the City of Salem Contributory Retirement System

EXHIBIT I Department Results

| Category | Water | South Essex Sewerage | Housing | North Shore Regional VOC | City | Salem Retirement Board | Total |
|---|------------------|----------------------------|------------------|-----------------------------------|-------------------|------------------------------|-------------------|
| 1. Total normal cost | \$83,062 | \$430,534 | \$158,553 | \$216,811 | \$4,169,838 | \$22,696 | \$5,081,494 |
| 2. Administrative expenses | 6,048 | 31,349 | 11,545 | 15,787 | 303,619 | 1,653 | 370,000 |
| 3. Expected employee contributions | <u>-64,057</u> | <u>-318,917</u> | <u>-98,842</u> | <u>-126,417</u> | <u>-2,419,022</u> | <u>-17,383</u> | <u>-3,044,638</u> |
| 4. Employer normal cost: (1) + (2) + (3) | \$25,053 | \$142,966 | \$71,256 | \$106,181 | \$2,054,435 | \$6,966 | \$2,406,856 |
| 5. Employer normal cost as a percent of payroll | 3.12% | 4.02% | 6.16% | 7.47% | 7.53% | 3.89% | |
| 6. Actuarial accrued liability | 4,036,130 | 14,351,787 | 4,843,214 | 3,096,422 | 152,183,900 | 870,846 | 179,382,299 |
| 7. Actuarial value of assets | <u>2,238,232</u> | <u>8,645,770</u> | <u>2,570,700</u> | <u>1,687,099</u> | <u>84,367,403</u> | <u>489,267</u> | <u>99,998,471</u> |
| 8. Unfunded actuarial accrued liability: (6) – (7) | \$1,797,898 | \$5,706,017 | \$2,272,514 | \$1,409,323 | \$67,816,497 | \$381,579 | \$79,383,828 |
| 9. Reallocation of Retirement Board unfunded actuarial accrued liability | <u>8,684</u> | <u>27,560</u> | <u>10,976</u> | <u>6,807</u> | <u>327,552</u> | <u>-381,579</u> | <u>0</u> |
| 10. Unfunded actuarial accrued liability with reallocation: (8) + (9) | \$1,806,582 | \$5,733,577 | \$2,283,490 | \$1,416,130 | \$68,144,049 | \$0 | \$79,383,828 |
| 11. Reallocation of Retirement Board normal cost | 73 | 415 | 207 | 308 | 5,963 | -6,966 | 0 |
| 12. Employer normal cost with reallocation: (4) + (11) | 25,126 | 143,381 | 71,463 | 106,489 | 2,060,398 | 0 | 2,406,857 |
| 13. Employer normal cost projected to July 1, 2008 | 25,685 | 146,571 | 73,053 | 108,859 | 2,106,247 | 0 | 2,460,415 |
| 14. 2002 ERI payments | 0 | 40,470 | 22,896 | 5,470 | 0 | 0 | 68,936 |
| 15. 2003 ERI payments | 4,475 | 0 | 0 | 2,534 | 172,672 | 0 | 179,681 |
| 16. Payment on remaining liability | <u>152,710</u> | <u>430,135</u> | <u>161,413</u> | <u>112,046</u> | <u>5,673,991</u> | <u>0</u> | <u>6,530,295</u> |
| 17. Budgeted appropriation for fiscal 2009: (13) + (14) + (15) + (16) | \$182,870 | \$617,276 | \$257,362 | \$228,909 | \$7,952,910 | \$0 | \$9,239,327 |
| 18. Payment date | August 1 | August 1 | August 1 | June 30 | July 1 | N/A | N/A |
| 19. Adjustment for timing | 1.006875 | 1.006875 | 1.006875 | 1.0825 | 1.00 | - - | - - |
| 20. Fiscal 2009 appropriation with reallocation, adjusted for timing: (17) x (19) | \$184,127 | \$621,520 | \$259,131 | \$247,794 | \$7,952,910 | \$0 | \$9,265,481 |
| 21. Fiscal 2010 appropriation with reallocation, adjusted for timing | \$187,849 | \$667,107 | \$281,387 | \$258,965 | \$8,233,450 | \$0 | \$9,628,758 |
| 22. Fiscal 2011 appropriation with reallocation, adjusted for timing | \$194,694 | \$691,998 | 4292,004 | \$269,260 | \$8,543,631 | \$0 | \$9,991,587 |

Notes: Administrative expenses allocated in proportion to total normal cost.

Actuarial value of assets allocated in proportion to actuarial accrued liability less present value of future ERI payments and adjusted for additional contributions by South Essex Sewerage.

SECTION 3: Supplemental Information for the City of Salem Contributory Retirement System

EXHIBIT J

Definitions of Pension Terms

The following list defines certain technical terms for the convenience of the reader:

Assumptions or actuarial assumptions:

The estimates on which the cost of the Plan is calculated including:

- (a) Investment return — the rate of investment yield that the Plan will earn over the long-term future;
- (b) Mortality rates — the death rates of employees and pensioners; life expectancy is based on these rates;
- (c) Retirement rates — the rate or probability of retirement at a given age;
- (d) Turnover rates — the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement.

Normal cost:

The amount of contributions required to fund the benefit allocated to the current year of service.

Actuarial accrued liability for actives:

The equivalent of the accumulated normal costs allocated to the years before the valuation date.

Actuarial accrued liability for pensioners:

The single sum value of lifetime benefits to existing pensioners. This sum takes account of life expectancies appropriate to the ages of the pensioners and the interest that the sum is expected to earn before it is entirely paid out in benefits.

Unfunded actuarial accrued liability:

The extent to which the actuarial accrued liability of the Plan exceeds the assets of the Plan. There are many approaches to paying off the unfunded actuarial accrued liability, from meeting the interest accrual only to amortizing it over a specific period of time.

SECTION 3: Supplemental Information for the City of Salem Contributory Retirement System

**Amortization of the unfunded
actuarial accrued liability:**

Payments made over a period of years equal in value to the Plan's unfunded actuarial accrued liability.

Investment return:

The rate of earnings of the Plan from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one year to the next.

SECTION 4: Reporting Information for the City of Salem Contributory Retirement System

EXHIBIT I

Summary of Actuarial Valuation Results

The valuation was made with respect to the following data supplied to us:

| | |
|---|-----|
| 1. Retired participants as of the valuation date (including 98 beneficiaries in pay status and 1 retired participant in suspended status) | 597 |
| 2. Participants active during the year ended December 31, 2007 with total accumulated contributions of \$29,656,373 and projected payroll of \$34,410,002 | 825 |
| 3. Inactive participants with a right to a return of their employee contributions as of December 31, 2007 | 170 |
| 4. Inactive participants with a vested right to a deferred or immediate benefit as of December 31, 2007 | 22 |

The actuarial factors as of January 1, 2008 are as follows:

| | |
|---|-------------------|
| 1. Normal cost, including administrative expenses | \$5,451,493 |
| 2. Expected employer contributions | <u>-3,044,638</u> |
| 3. Employer normal cost: (1) + (2) | \$2,406,855 |
| 4. Actuarial accrued liability | 179,382,299 |
| Retired participants and beneficiaries | \$88,860,292 |
| Active participants | 88,628,007 |
| Inactive participants | \$1,894,000 |
| 5. Actuarial value of assets (\$99,068,990 at market value) | 99,998,471 |
| 6. Unfunded actuarial accrued liability: (4) - (5) | 79,383,828 |

The actuarial factors projected to July 1, 2008 are as follows:

| | |
|---|-------------|
| 1. Employer normal cost projected to July 1, 2008, adjusted for timing | \$2,471,051 |
| 2. Projected unfunded actuarial accrued liability | 82,593,381 |
| 3. Payment on projected unfunded actuarial accrued liability, adjusted for timing | 6,581,607 |
| 4. Preliminary recommended contribution: (1) + (3), adjusted for timing | 9,052,658 |
| 5. Budgeted appropriation, adjusted for timing, from prior valuation | 9,478,304 |
| 6. Fiscal 2009 appropriation: [(4) + (5)] ÷ 2 | 9,265,481 |
| 7. Projected payroll | 35,175,708 |
| 8. Total recommended contribution as a percentage of projected payroll: (6) ÷ (7) | 26.34% |

Notes: Amortization payments increase at 4.0% per year.

December 31, 2007 market value of assets of \$100,667,145 reported on the Annual Statement as of December 31, 2007 was reduced by the value of the First America Asia Fund (\$1,598,155) to \$99,068,990.

SECTION 4: Reporting Information for the City of Salem Contributory Retirement System

EXHIBIT II

Supplementary Information Required by the GASB – Schedule of Employer Contributions

| Plan Year Ended December 31 | Annual Required Contributions | Actual Contributions | Percentage Contributed |
|--|--|---------------------------------|-----------------------------------|
| 2004 | \$6,632,497 | \$6,632,497 | 100.0% |
| 2005 | 8,052,556 | 8,052,556 | 100.0% |
| 2006 | 8,468,103 | 8,468,103 | 100.0% |
| 2007 | 9,176,126 | 9,176,126 | 100.0% |

SECTION 4: Reporting Information for the City of Salem Contributory Retirement System**EXHIBIT III****Supplementary Information Required by the GASB – Schedule of Funding Progress**

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded/ (Overfunded) AAL (UAAL) (b) - (a) | Funded Ratio (a) / (b) | Covered Payroll (c) | UAAL as a Percentage of Covered Payroll [(b) - (a)] / (c) |
|---|--|--|--|---------------------------------------|------------------------------------|--|
| 01/01/1997 | \$51,236,360 | \$82,440,774 | \$31,204,414 | 62.15% | \$22,930,939 | 136.08% |
| 01/01/1999 | 68,563,143 | 111,294,953 | 42,731,810 | 61.60% | 25,411,629 | 168.16% |
| 01/01/2001 | 73,727,923 | 117,334,727 | 43,606,804 | 62.84% | 29,072,187 | 149.99% |
| 01/01/2003 | 76,438,885 | 137,111,559 | 60,672,674 | 55.75% | 31,089,195 | 195.16% |
| 01/01/2004 | 80,659,012 | 142,499,185 | 61,840,173 | 56.60% | 29,355,291 | 210.66% |
| 01/01/2005 | 81,801,377 | 156,479,479 | 74,678,102 | 52.28% | 31,328,083 | 238.37% |
| 01/01/2006 | 84,796,044 | 166,958,606 | 82,162,562 | 50.79% | 32,824,144 | 250.31% |
| 01/01/2008 | 99,998,471 | 179,382,299 | 79,383,828 | 55.75% | 34,410,002 | 230.70% |

SECTION 4: Reporting Information for the City of Salem Contributory Retirement System

EXHIBIT IV

Supplementary Information Required by the GASB

| | |
|--------------------------------------|--|
| Valuation date | January 1, 2008 |
| Actuarial cost method | Entry Age Normal Cost Method |
| Amortization method | Increasing at 3.5% per year |
| Remaining amortization period | 17 years remaining as of July 1, 2008 |
| Asset valuation method | The difference between the expected return and actual investment return on a market value basis is recognized over a five-year period. |

| | |
|-------------------------------|---|
| Actuarial assumptions: | |
| Investment rate of return | 8.25% |
| Projected salary increases | 5.50% |
| Cost of living adjustments | 3.00% for first \$12,000 of retirement income |

| | |
|--|------------|
| Plan membership: | |
| Retired participants and beneficiaries receiving benefits | 596* |
| Terminated participants entitled to a return of their employee contributions | 170 |
| Terminated participants with a vested right to a deferred or immediate benefit | 22 |
| Active participants | <u>825</u> |
| Total | 1,613 |

* Excludes one suspended pensioner.

SECTION 4: Reporting Information for the City of Salem Contributory Retirement System

EXHIBIT V

Actuarial Assumptions and Actuarial Cost Method

Mortality Rates:

| | |
|--------------------------|---|
| <i>Pre-Retirement:</i> | RP-2000 Employee Mortality Table |
| <i>Healthy Retiree:</i> | RP-2000 Healthy Annuitant Mortality Table |
| <i>Disabled Retiree:</i> | RP-2000 Healthy Annuitant Mortality Table set forward 2 years |

Termination Rates before Retirement:

Groups 1 and 2 – Rate (%)

| Age | Mortality | | | Disability |
|-----|-----------|--------|--|------------|
| | Male | Female | | |
| 20 | 0.03 | 0.02 | | 0.01 |
| 25 | 0.04 | 0.02 | | 0.02 |
| 30 | 0.04 | 0.03 | | 0.03 |
| 35 | 0.08 | 0.05 | | 0.06 |
| 40 | 0.11 | 0.07 | | 0.10 |
| 45 | 0.15 | 0.11 | | 0.15 |
| 50 | 0.21 | 0.17 | | 0.19 |
| 55 | 0.36 | 0.27 | | 0.24 |
| 60 | 0.67 | 0.51 | | 0.28 |

Notes: 55% of the disability rates shown represent accidental disability.
20% of the accidental disabilities will die from the same cause as the disability.
55% of the death rates shown represent accidental death.

SECTION 4: Reporting Information for the City of Salem Contributory Retirement System

Termination Rates before Retirement (continued):

Group 4 – Rate (%)

Mortality

| Age | Male | Female | Disability |
|-----|------|--------|------------|
| 20 | 0.03 | 0.02 | 0.10 |
| 25 | 0.04 | 0.02 | 0.20 |
| 30 | 0.04 | 0.03 | 0.30 |
| 35 | 0.08 | 0.05 | 0.30 |
| 40 | 0.11 | 0.07 | 0.30 |
| 45 | 0.15 | 0.11 | 1.00 |
| 50 | 0.21 | 0.17 | 1.25 |
| 55 | 0.36 | 0.27 | 1.20 |
| 60 | 0.67 | 0.51 | 0.85 |

Notes: 90% of the disability rates shown represent accidental disability.
 60% of the accidental disabilities will die from the same cause as the disability.
 90% of the death rates shown represent accidental death.

Withdrawal Rates:

Rate per year (%)

| Years of Service | Groups 1 and 2 | Years of Service | Group 4 |
|------------------|----------------|------------------|---------|
| 0 | 15.0 | 0 – 10 | 1.5 |
| 1 | 12.0 | 11+ | 0.0 |
| 2 | 10.0 | | |
| 3 | 9.0 | | |
| 4 | 8.0 | | |
| 5 – 9 | 7.6 | | |
| 10 – 14 | 5.4 | | |
| 15 – 19 | 3.3 | | |
| 20 – 24 | 2.0 | | |
| 25 - 29 | 1.0 | | |
| 30+ | 0.0 | | |

SECTION 4: Reporting Information for the City of Salem Contributory Retirement System

| Retirement Rates: | Rate per year (%) | | | |
|--|--|----------------|--------|---------|
| | Age | Groups 1 and 2 | | Group 4 |
| | | Male | Female | |
| | 50 – 51 | 1.0 | 1.5 | 2.0 |
| | 52 | 1.0 | 2.0 | 2.0 |
| | 53 | 1.0 | 2.5 | 5.0 |
| | 54 | 2.0 | 2.5 | 7.5 |
| | 55 | 2.0 | 5.5 | 15.0 |
| | 56 – 57 | 2.5 | 6.5 | 10.0 |
| | 58 | 5.0 | 6.5 | 10.0 |
| | 59 | 6.5 | 6.5 | 15.0 |
| | 60 | 12.0 | 5.0 | 20.0 |
| | 61 | 20.0 | 13.0 | 20.0 |
| | 62 | 30.0 | 15.0 | 25.0 |
| | 63 | 25.0 | 12.5 | 25.0 |
| | 64 | 22.0 | 18.0 | 30.0 |
| | 65 | 40.0 | 15.0 | 100.0 |
| | 66 - 67 | 25.0 | 20.0 | -- |
| | 68 | 30.0 | 25.0 | -- |
| | 69 | 30.0 | 20.0 | -- |
| | 70 | 100.0 | 100.0 | -- |
| Unknown Data for Participants: | Same as those exhibited by participants with similar known characteristics. If not specified, participants are assumed to be male. | | | |
| Age of Spouse: | Female (or male) spouses 3 years younger (or older) than their spouses. | | | |
| Percent Married: | 80% | | | |
| Net Investment Return: | 8.25% | | | |
| Interest on Employee Contributions: | 3.5% | | | |
| Investment Expenses: | \$370,000 for calendar 2008 (previously, \$360,000 for calendar 2006) | | | |
| Salary Increases: | 5.5% | | | |

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| | |
|-----------------------------------|---|
| 2007 Salary: | Salary reported in the data, except for employees missing salaries, whose salary was estimated from contributions. |
| Total Service: | Total creditable service reported in the data. |
| Actuarial Value of Assets: | <p>Market value of assets less unrecognized return in each of the last five years. Unrecognized return is equal to the difference between the actual market value return and the expected market value return and is recognized over a five-year period, further adjusted, if necessary, to be within 20% of the market value.</p> <p>Market value of assets as reported in the City of Salem Contributory Retirement System's Annual Statement, reduced by the value of the First America Asia Fund.</p> |
| Actuarial Cost Method: | Entry Age Normal Actuarial Cost Method. Entry Age is the age of the participant less total creditable service. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are allocated by salary. |
| Changes in Assumptions: | The administrative expense assumption has been increased from \$360,000 for calendar 2006 to \$370,000 for calendar 2008 to better reflect past experience and future expectations. |

SECTION 4: Reporting Information for the City of Salem Contributory Retirement System

EXHIBIT VI

Summary of Plan Provisions

This exhibit summarizes the major provisions of Chapter 32 of the Laws of Massachusetts.

Plan Year: January 1 – December 31

Retirement Benefits

Employees covered by the Contributory Retirement Law are classified into one of four groups depending on job classification. Group 1 comprises most positions in state and local government. It is the general category of public employees. Group 4 comprises mainly police and firefighters. Group 2 is for other specified hazardous occupations. (Officers and inspectors of the State Police are classified as Group 3.)

The annual amount of the retirement allowance is based on the member's final three-year average salary multiplied by the number of years and full months of creditable service at the time of retirement and multiplied by a percentage according to the following table based on the age of the member at retirement:

| Age Last Birthday at Date of Retirement | | | |
|---|------------|------------|------------|
| Percent | Group 1 | Group 2 | Group 4 |
| 2.5 | 65 or over | 60 or over | 55 or over |
| 2.4 | 64 | 59 | 54 |
| 2.3 | 63 | 58 | 53 |
| 2.2 | 62 | 57 | 52 |
| 2.1 | 61 | 56 | 51 |
| 2.0 | 60 | 55 | 50 |
| 1.9 | 59 | -- | 49 |
| 1.8 | 58 | -- | 48 |
| 1.7 | 57 | -- | 47 |
| 1.6 | 56 | -- | 46 |
| 1.5 | 55 | -- | 45 |

A member's final three-year average salary is defined as the greater of the highest consecutive three-year average annual rate of regular compensation and the average

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annual rate of regular compensation received during the last three years of creditable service prior to retirement. The \$30,000 cap on salary used in a benefit determination for any employee hired after January 1, 1979 has been removed.

The maximum annual amount of the retirement allowance is 80 percent of the member's final three-year average salary. Any member who is a veteran also receives an additional yearly retirement allowance of fifteen dollars per year of creditable service, not exceeding three hundred dollars. The veteran allowance is paid in addition to the 80 percent maximum.

Employee Contributions

Employees hired before January 1, 1975 contribute 5 percent of their salary; employees hired after December 31, 1974 and before January 1, 1984 contribute 7 percent; employees hired after January 1, 1984 contribute 8 percent; employees hired after July 1, 1996 contribute 9 percent. In addition, employees hired after December 31, 1978 contribute an additional 2 percent of salary in excess of \$30,000.

Employees hired after 1983 who leave with less than five years of credited service receive no interest on their contributions and employees who leave with five but less than ten years receive one-half the rate of regular interest otherwise payable.

Retirement Benefits (Superannuation)

Members of Group 1, 2 or 4 may retire upon the attainment of age 55. For retirement at ages below 55, twenty years of creditable service is required.

Members who terminate before age 55 with ten or more years of creditable service are eligible for a retirement allowance upon the attainment of age 55 (provided they have not withdrawn their accumulated deductions from the Annuity Savings Fund of the system).

Ordinary Disability Benefits

A member who is unable to perform his/her job due to a non-occupational disability will receive a retirement allowance if he has ten or more years of creditable service and has not reached age 55. The annual amount of such allowance shall be determined as if the member retired for superannuation at age 55, based on the amount of creditable service at the date of disability. For veterans, there is a minimum benefit

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of 50 percent of the member's most recent year's pay plus an annuity based on his own contributions.

Accidental Disability Benefit

For a job-connected disability the benefit is 72 percent of the member's most recent annual pay plus an annuity based on his own contributions, plus additional amounts for surviving children. Benefits are capped at 75 percent of annual rate of regular compensation for employees who become members after January 1, 1988.

Death Benefits

In general, the beneficiary of an employee who dies in active service will receive a refund of the employee's own contributions. Alternatively, if the employee were eligible to retire on the date of his death, a spouse's benefit will be paid the full amount the employee would have received under Option C (previously, two-thirds of the amount). The surviving spouse of a member who dies with two or more years of credited service has the option of a refund of the employee's contributions or a monthly benefit regardless of eligibility to retire, if they were married for at least one year. There is also a minimum widow's pension of \$500 per month, and there are additional amounts for surviving children.

If an employee's death is job-connected, the spouse will receive 72 percent of the member's most recent annual pay in addition to a refund of the member's accumulated deductions, plus additional amounts for surviving children. However, in accordance with Section 100 of Chapter 32, the surviving spouse of a police officer, firefighter or corrections officer is killed in the line of duty will be eligible to receive an annual benefit equal to the maximum salary held by the member at the time of death.

"Heart And Lung Law" And Cancer Presumption

Any case of hypertension or heart disease resulting in total or partial disability or death to a uniformed fireman, permanent member of a police department, or certain employees of a county correctional facility is presumed to have been suffered in the line of duty, unless the contrary is shown by competent evidence. Any case of disease of the lungs or respiratory tract resulting in total disability or death to a uniformed fireman is presumed to have been suffered in the line of duty, unless the contrary is

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shown by competent evidence. There is an additional presumption for uniformed firemen that certain types of cancer are job-related if onset occurs while actively employed or within five years of retirement.

Options

Members may elect to receive a full retirement allowance payable for life under Option A. Under Option B a member may elect to receive a lower monthly allowance in exchange for a guarantee that at his death any of his contributions not expended for annuity payments will be refunded to his beneficiary. Option C allows the member to take a lesser retirement allowance in exchange for providing his survivor with two-thirds of the lesser amount. Option C pensioners will have their benefits converted from a reduced to a full retirement if the beneficiary predeceases the retiree.

Post-Retirement Benefits

The Board has adopted the provisions of Section 51 Chapter 127 of the Acts of 1999, which provide that the Retirement Board may approve an annual COLA in excess of the Consumer Price Index but not to exceed a 3% COLA on the first \$12,000 of a retirement allowance. Cost-of-living increases granted prior to July 1, 1998 are reimbursed by the Commonwealth and not reflected in this report.

Changes in Plan Provisions:

There have been no changes in plan provisions since the last valuation.
